

Demystifying Porn 2.0: A look into a major adult video streaming website

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LOOKING AT PORN

What The Internet Was Made For

**Every second \$3,075
is spent on porn**



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**By the end of this presentation,
you could have earnt \$3,690,000**

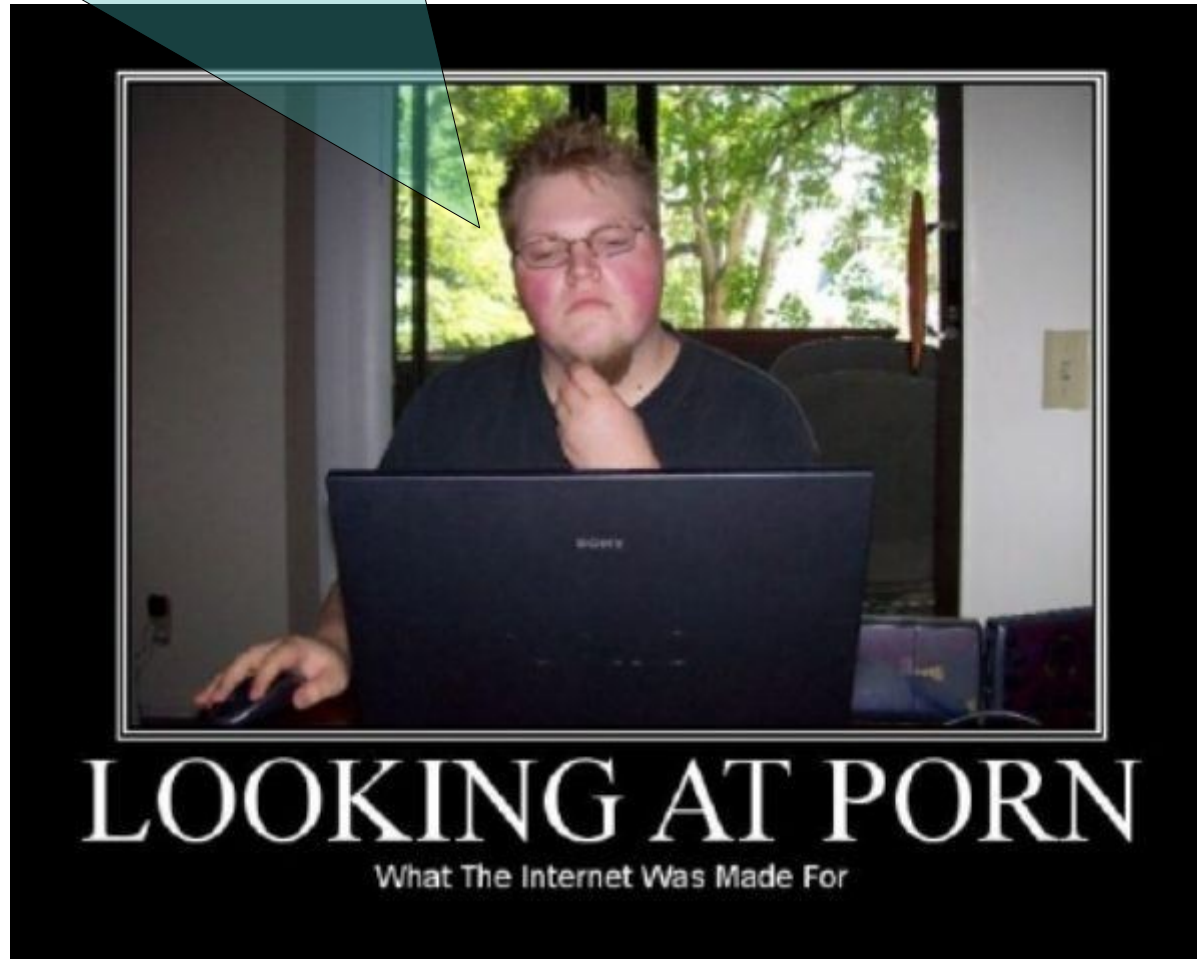
12% of the web is porn



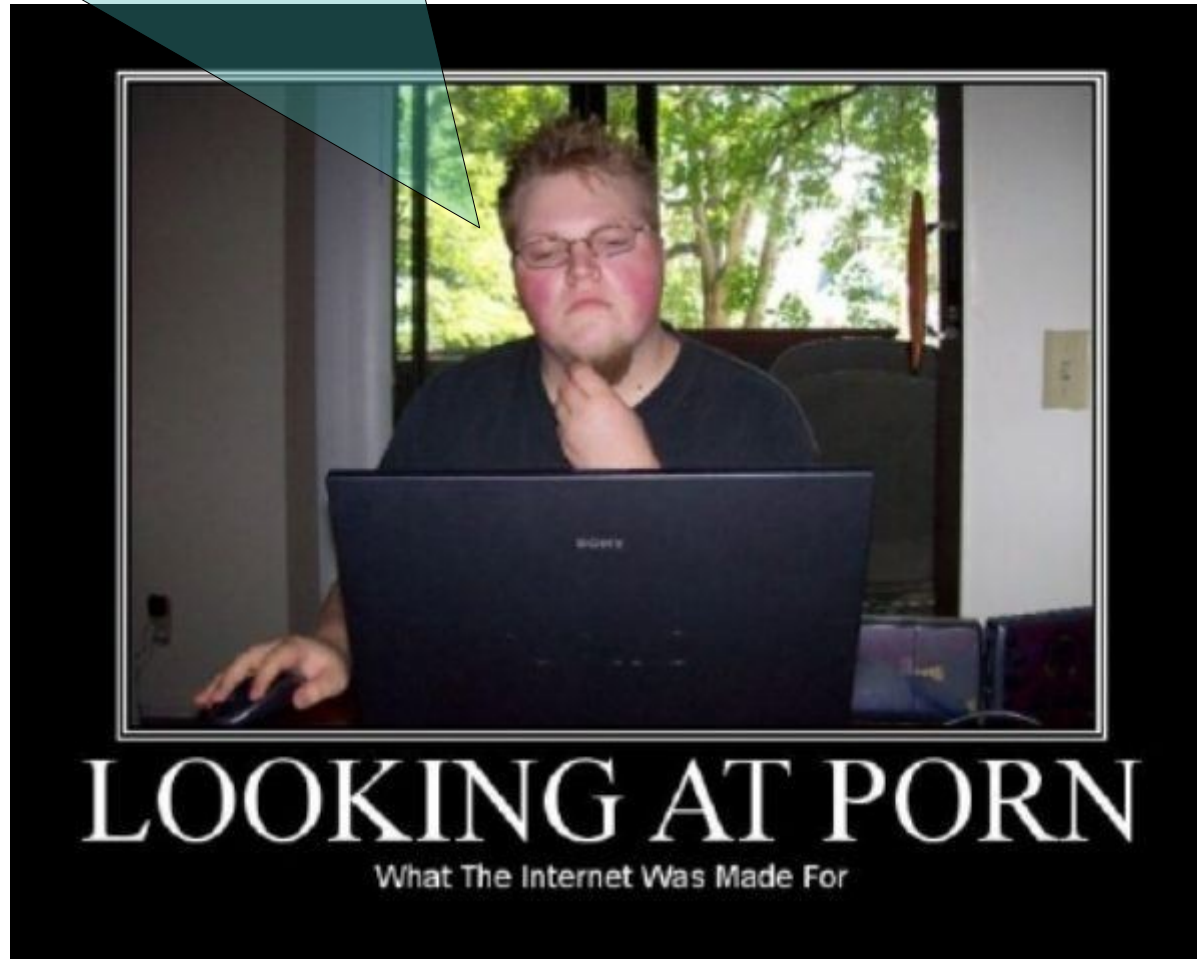
LOOKING AT PORN

What The Internet Was Made For

42.7% of Internet users view porn



Traffic estimates go as high as 30%



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Up to 18% of P2P content

**Where is the
research?**



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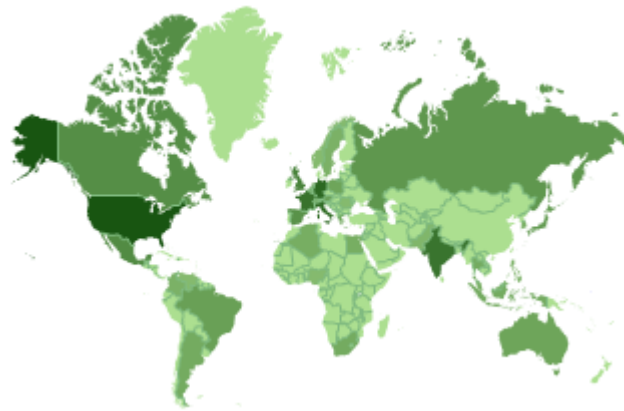
**We want to better understand the nature
and characteristics of porn in the Internet**

Porn 2.0

- Traditionally porn was static, non-interactive content
 - Bespoke paid websites
- Porn 2.0 has emerged in the last 5 years
 - User video uploads, streaming, downloading, commenting, rating etc.
- Gained huge popularity across the globe
 - There are 5 Porn 2.0 websites in the Alexa Top 100

Porn 2.0: YouPorn

- Prominent Porn 2.0 website
- Founded in 2006
- Boasts of 100 million page views per day
- Several key consumers
 - 19.9% US
 - 9.4% Germany
 - 7.7% Italy
 - 7.4% India
 - 7.3% France
 - 4.1% UK



YouPorn Crawling

- Collected three key datasets from YouPorn
 - Snapshot: A full crawl of all videos
 - 3 day: A repeat crawl three days later
 - Daily: Daily crawls of new videos
- Collected several items of data
 - Number of views, number of ratings, rating, number of comments, duration, category information, upload date, user

YouPorn Crawling

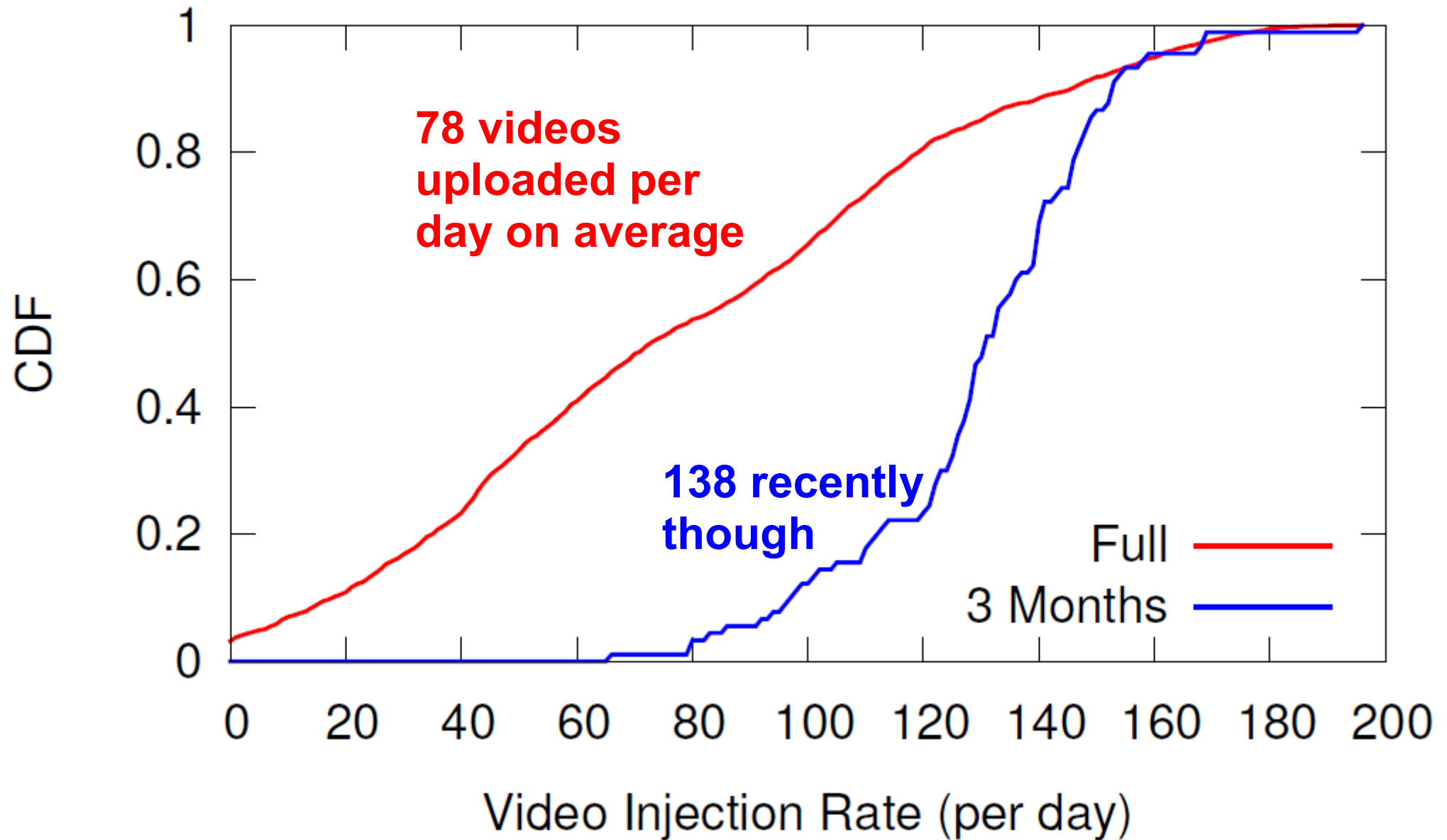
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Name	Period	# Vids	# Views
Snapshot	28/02/13	183k	61b
3 Day	3/03/13	183k	111m
Daily	1/03 – 4/05/2013	1656	96m

Characterising the content

- Many 'snippets' of content
 - Missing preambles
 - Rarely involve a story or conversation
- Short videos
 - Typically around 5 minutes long
 - 80% below 15 minutes
- This is user (generated) content
- Interesting thought experiment...
 - Usage patterns totally different to most other video services

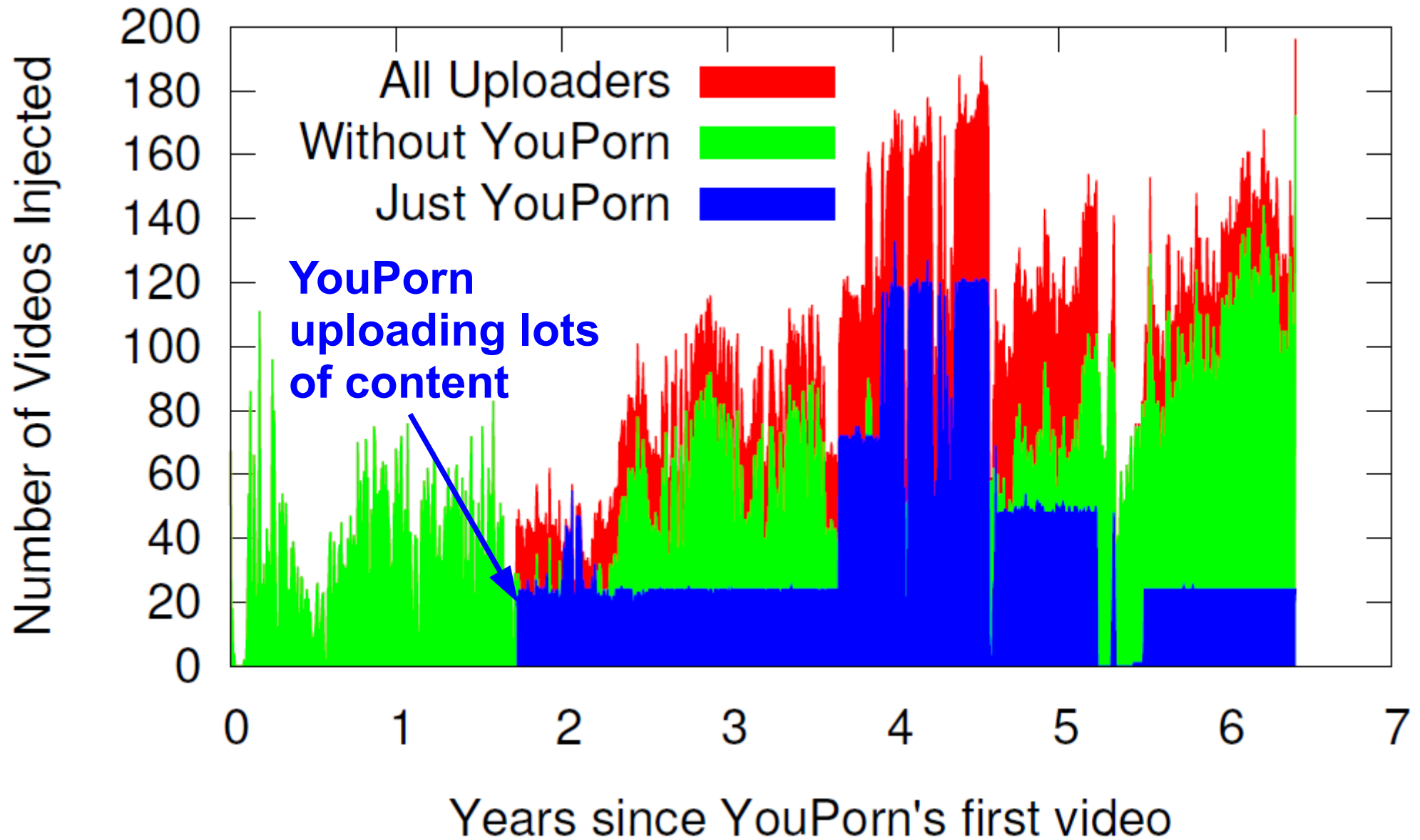
Injection Rates



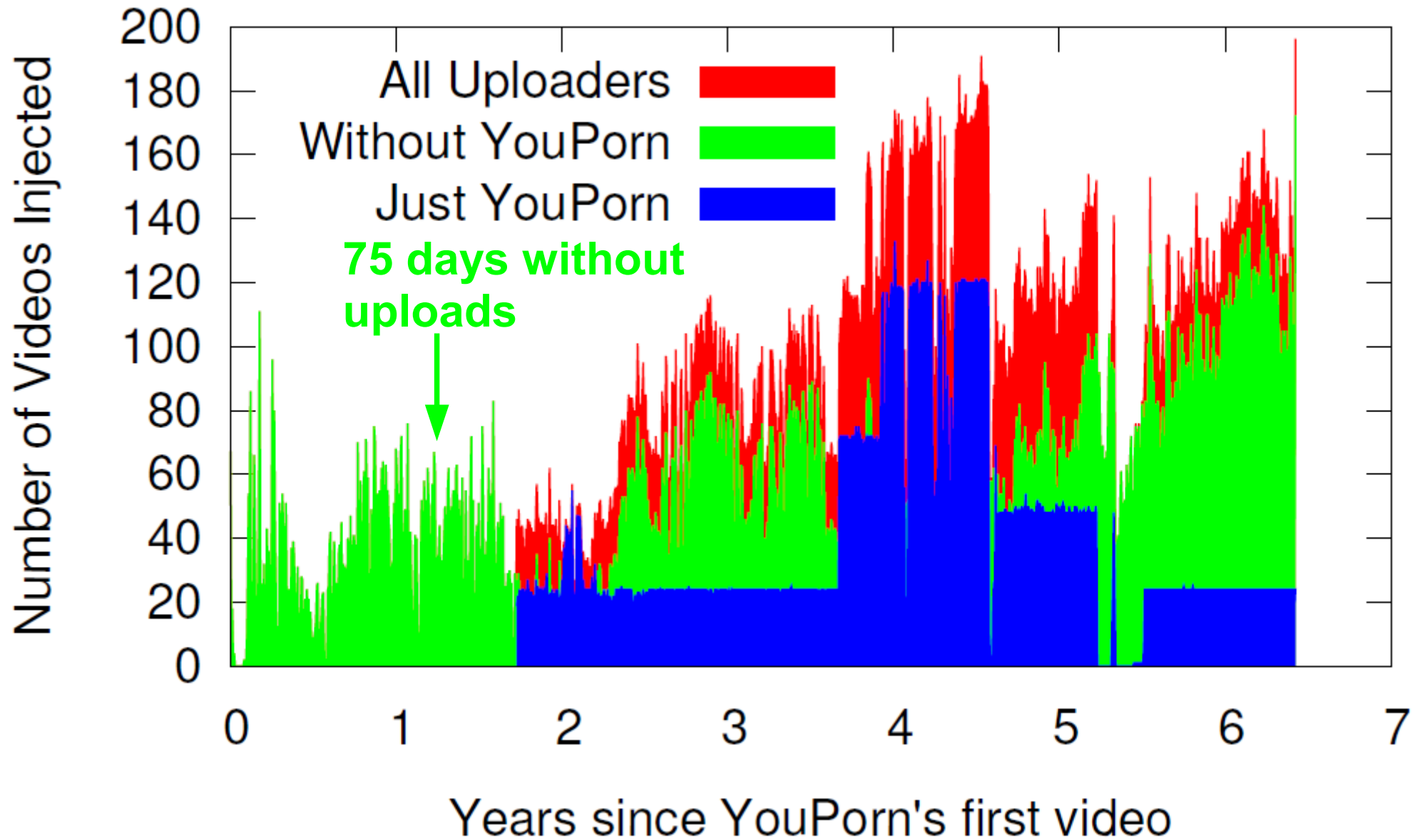
Nature of Uploaders

- Not many unique active uploaders: 5,849!
- Highly skewed distribution
 - 56% upload a single video
 - 80% upload at most 5 videos
- The case is the same for amateur content
- Heavy commercial impact
 - Top 100 all commercial players (teasers)
 - Highest non-commercial ranked 180 (116 vids)
 - Is this model so revolutionary after all?

Injection Rates



Injection Rates



Upload Processing

- Studied status of each upload (numerical ID)
 - 61% of content is 'being processed'
 - Experimentation showed this was 'being vetted'
 - Effective system
 - Only 11.7% of content is removed
 - Note that removal can only be done by YouPorn
- Means only 18% of uploads become live
- Most true UGC content getting trapped
 - Safer: no copyright risks, all actors over 18, any animals were treated well etc.

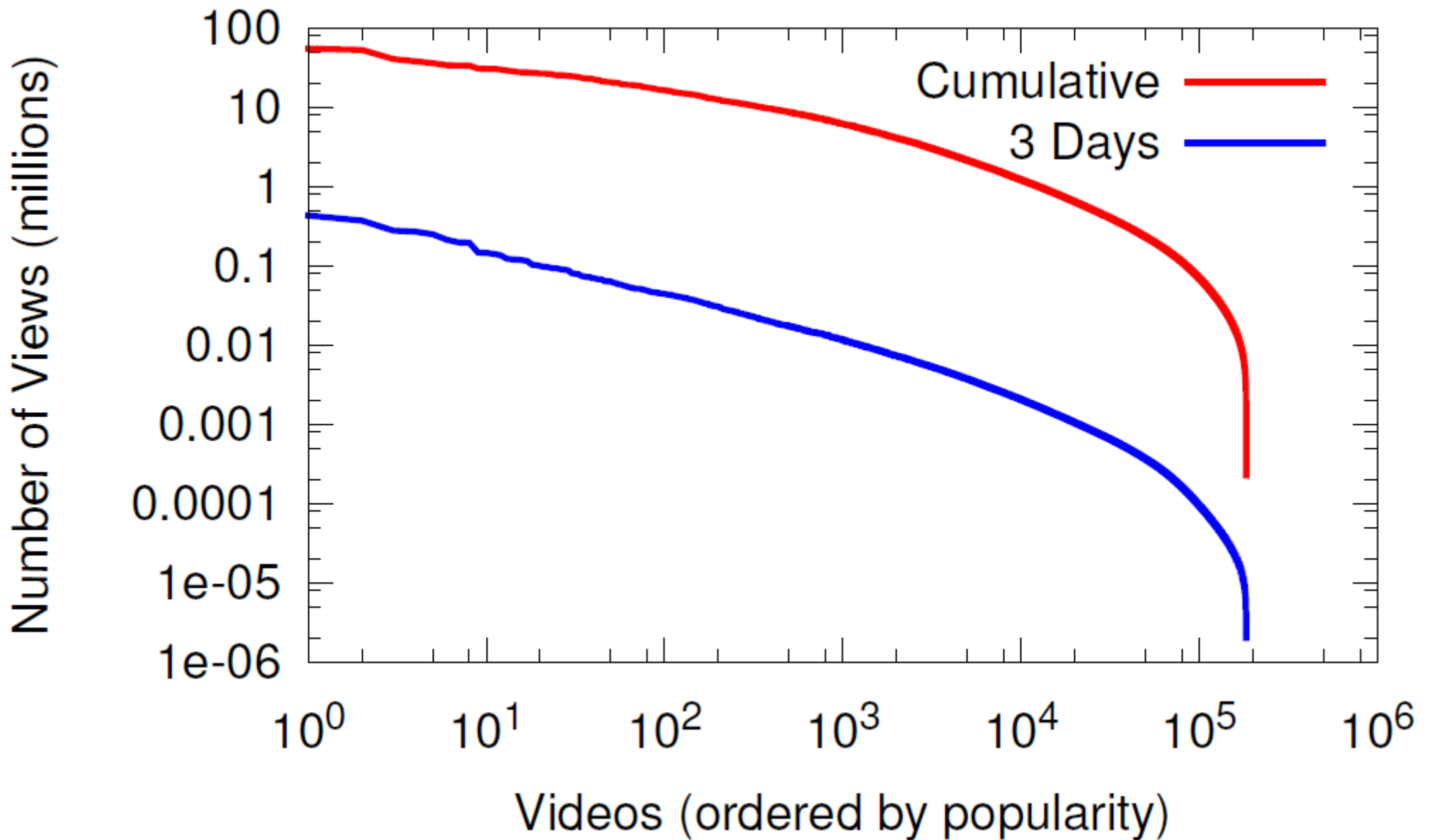
The Quirks of Porn 2.0

- Popularity
 - Popularity trends are far flatter in Porn 2.0
 - Users 'spread it around'
- User behaviour
 - Largely ambivalent audience
 - Highly elastic tastes
 - But an impatient one (lots and clicks and skips)
- Product differentiation is *extremely* difficult
 - And producers often don't particularly try
- Many others...

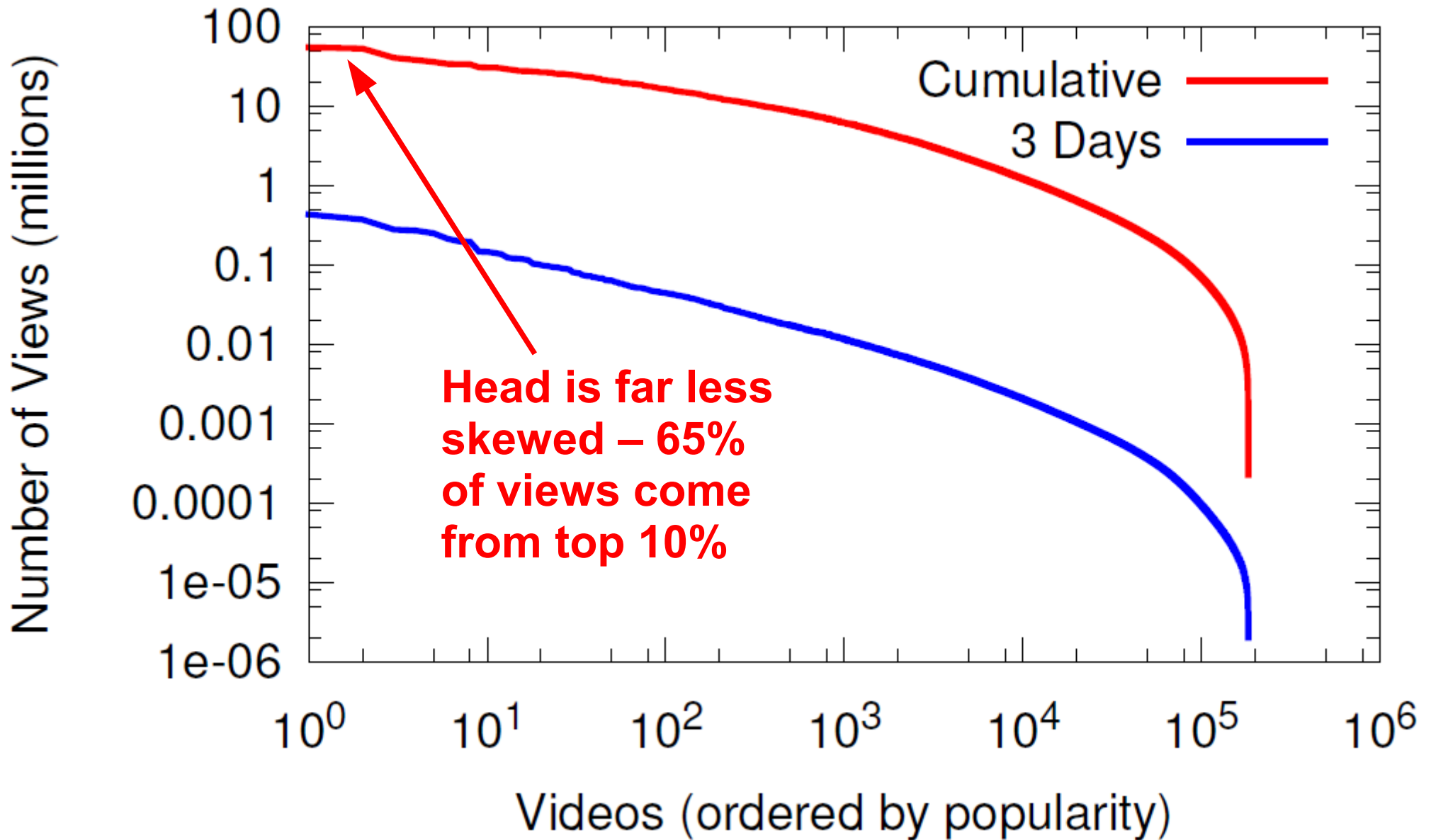
ANY
QUESTIONS
?

Characterising YouPorn's Video Popularity

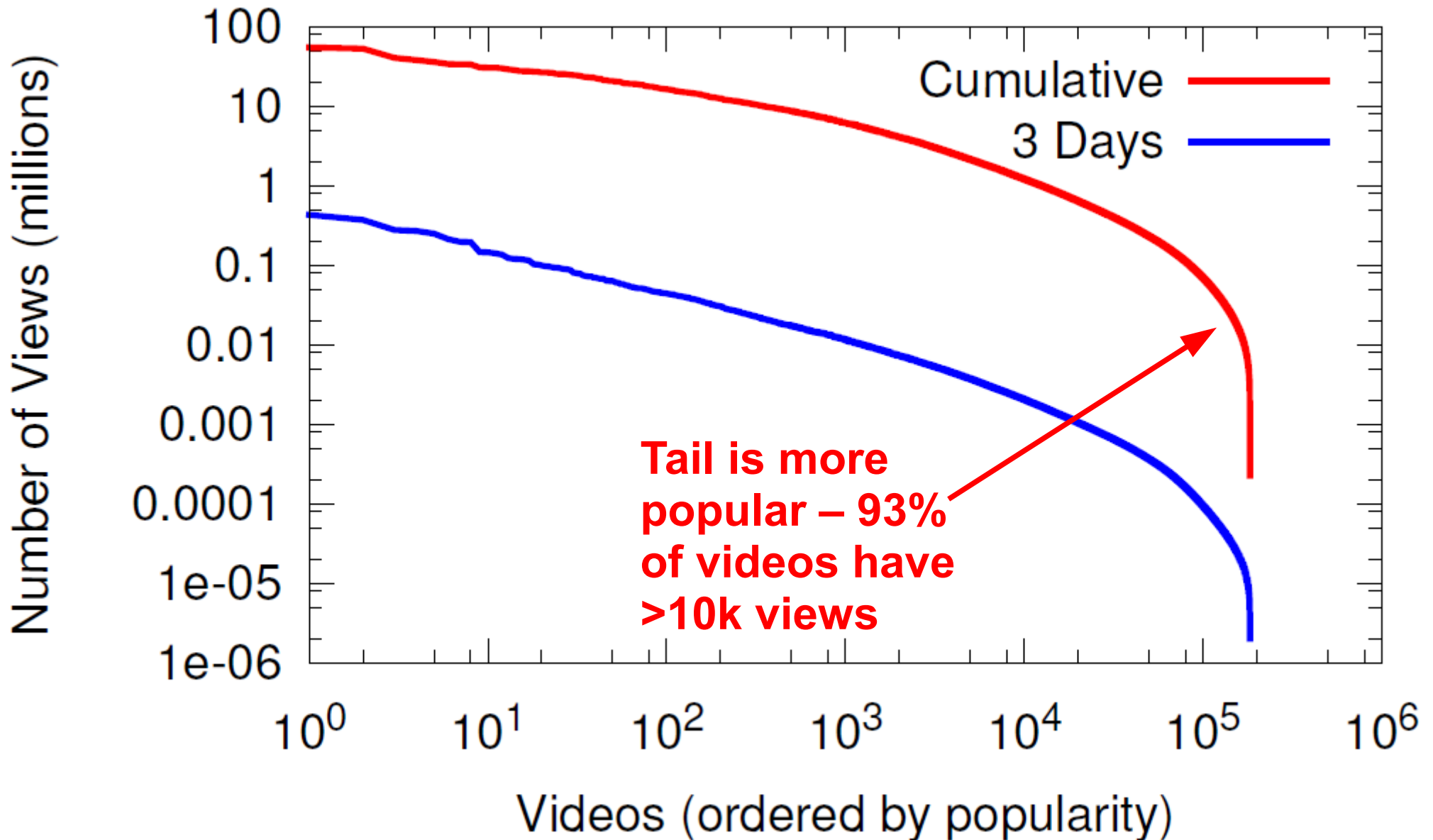
Popularity Distribution



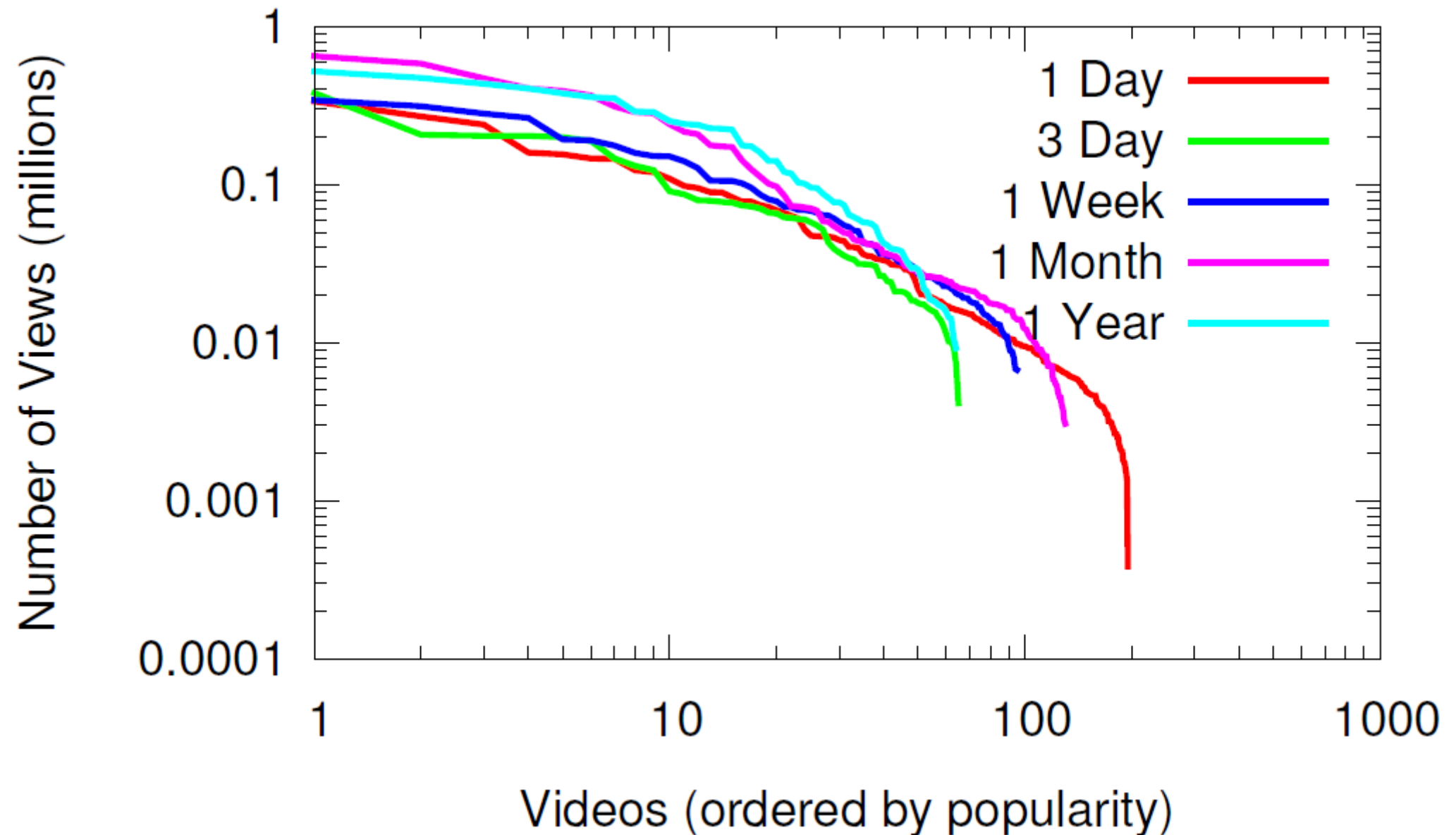
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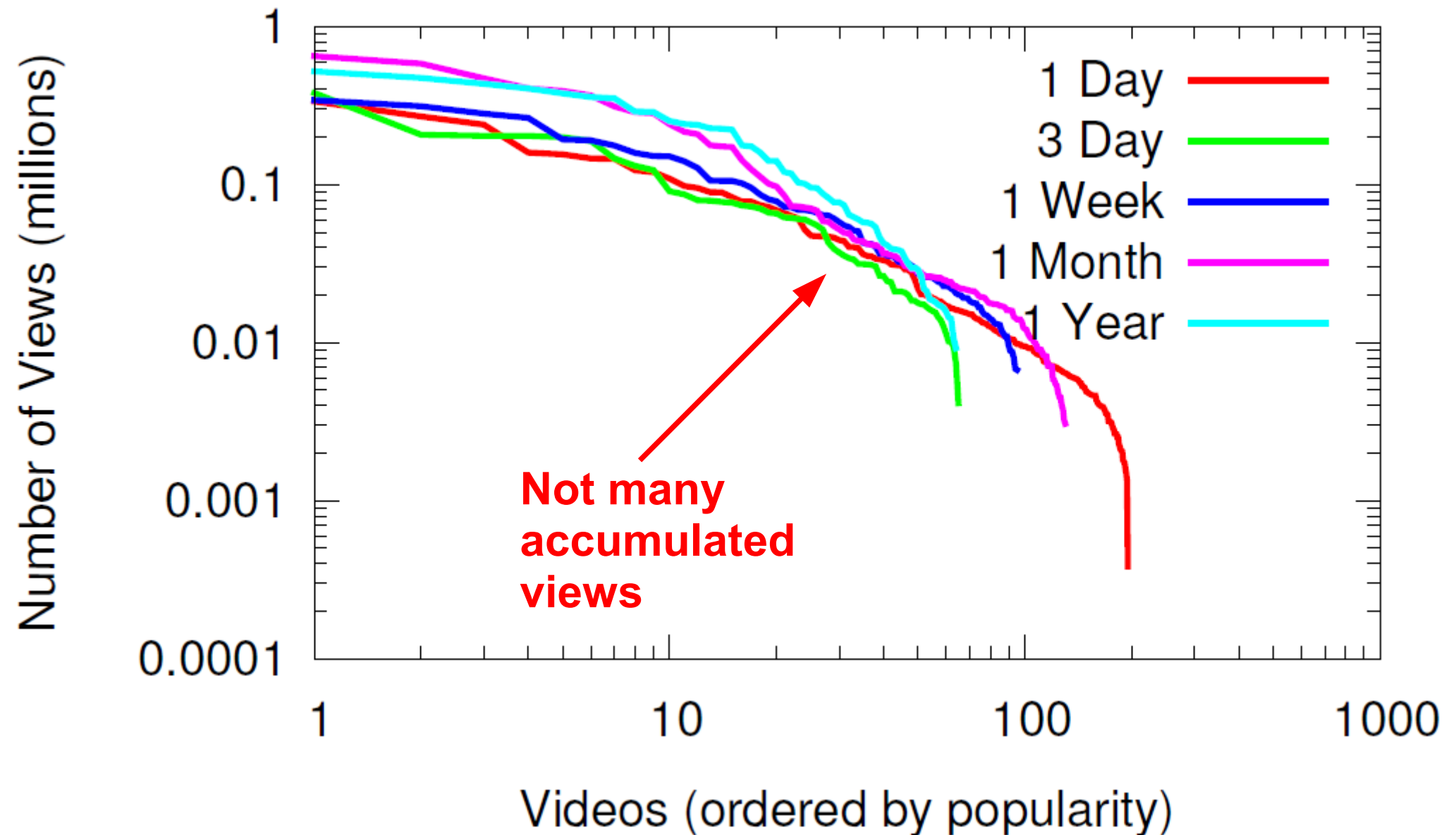
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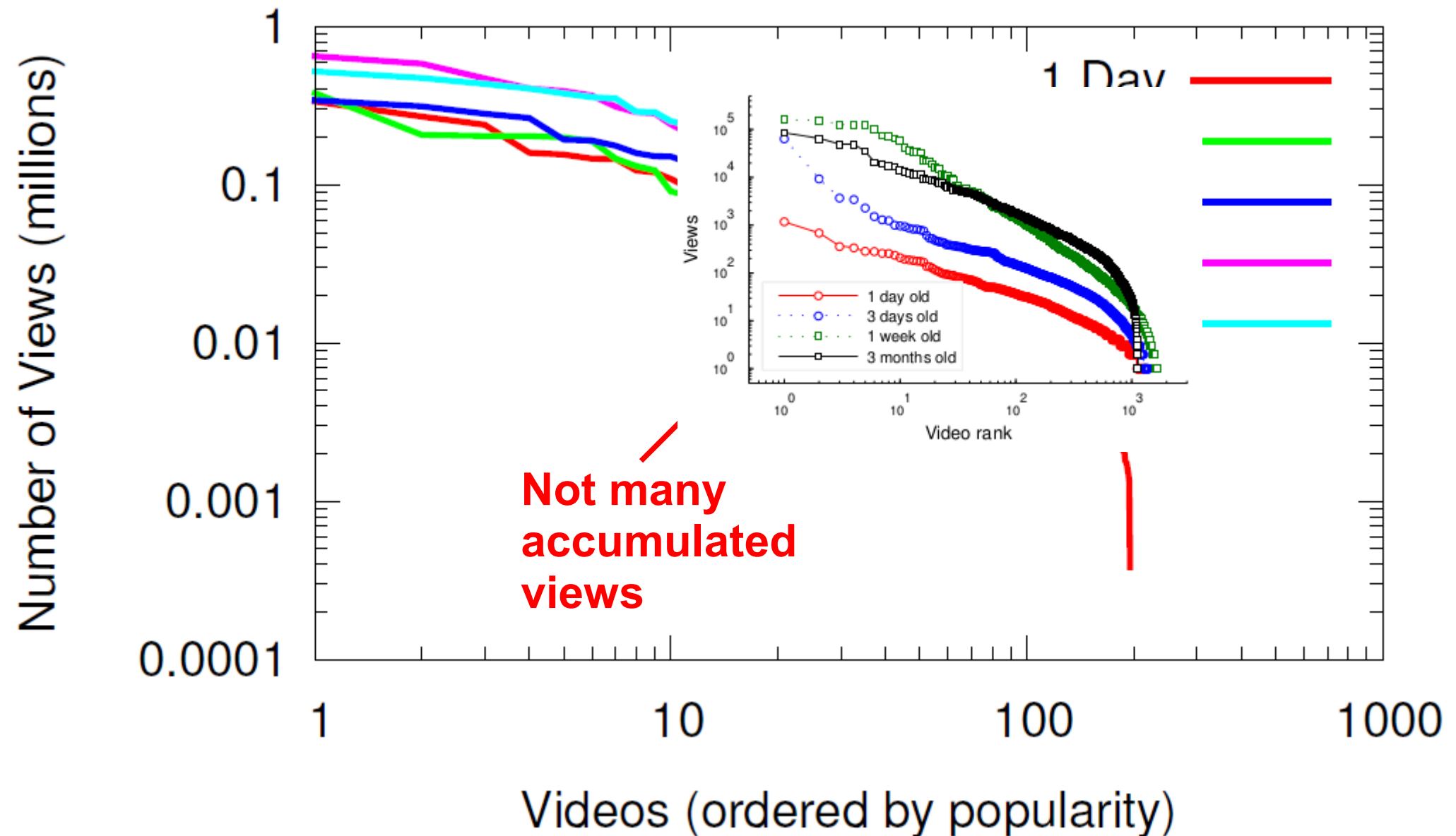
Number of Views over Time



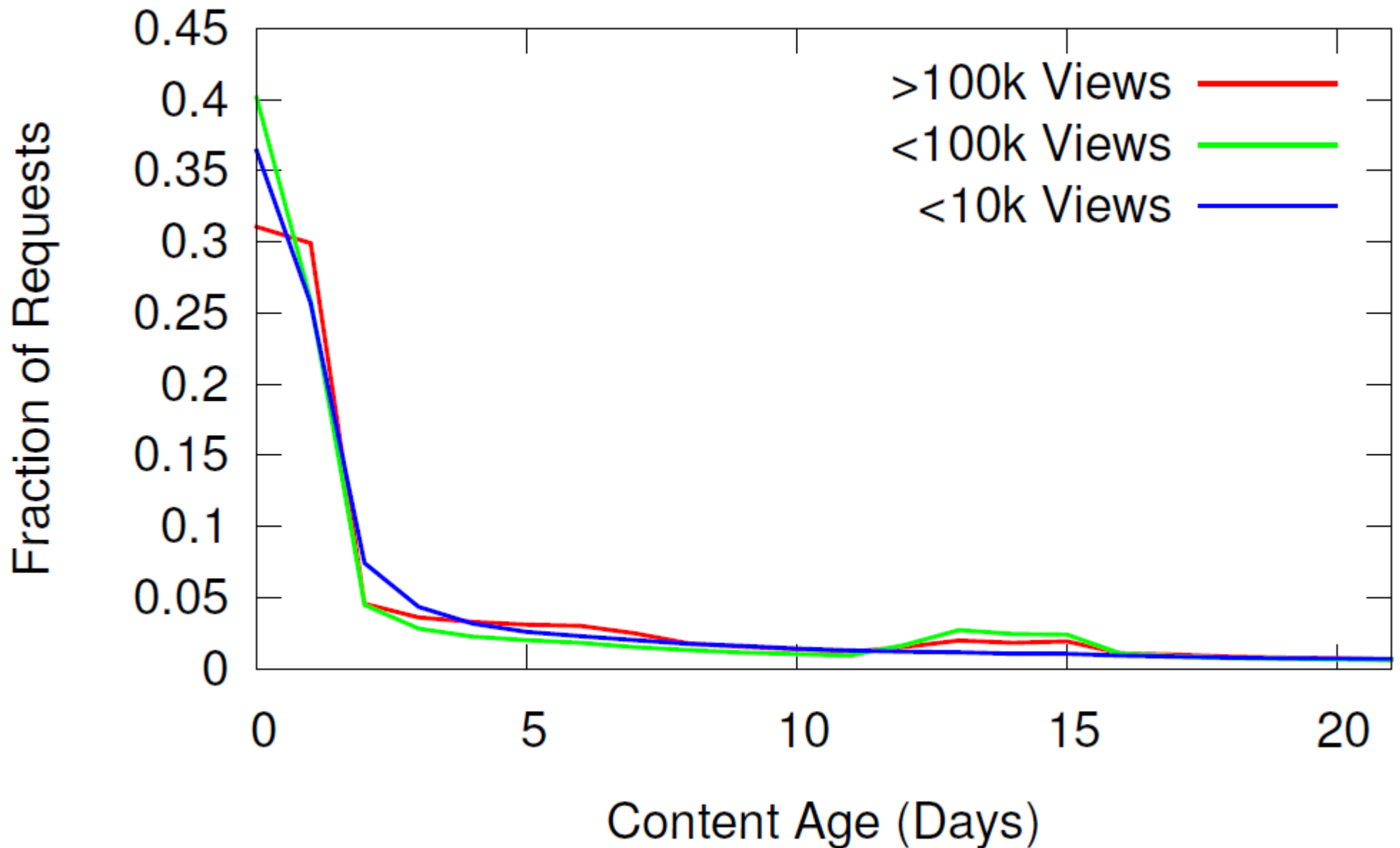
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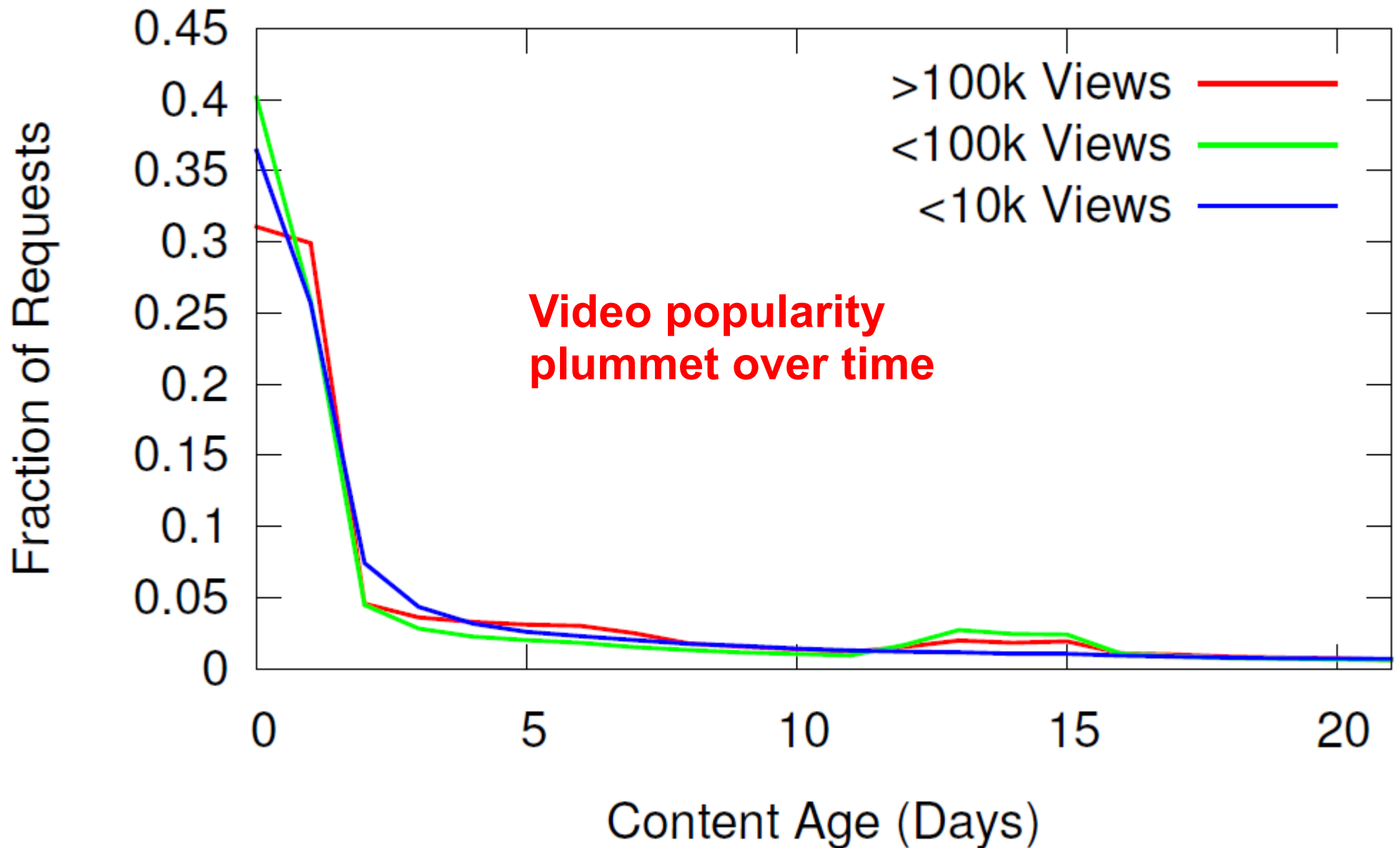
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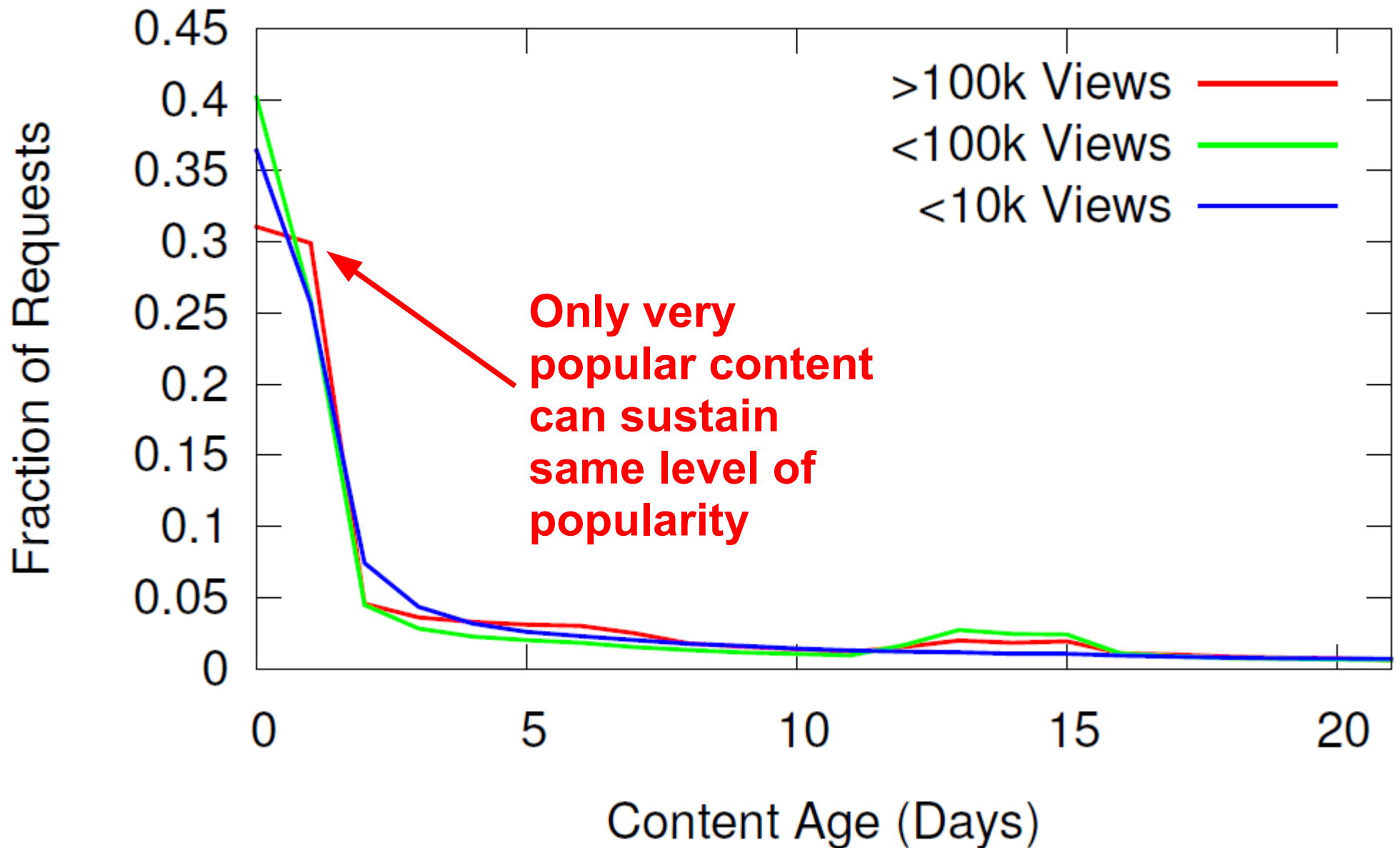
Video Popularity over Time



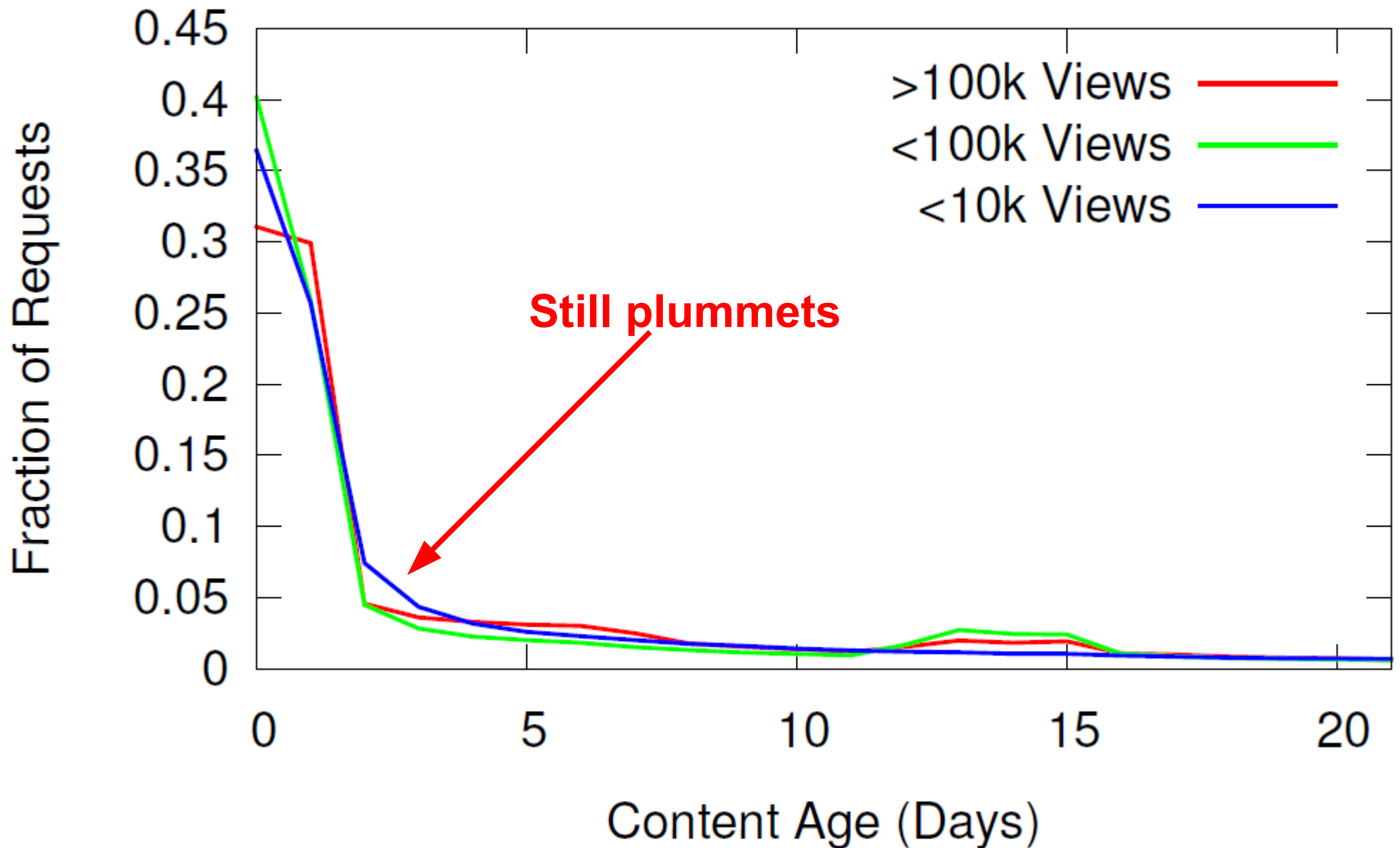
Video Popularity over Time



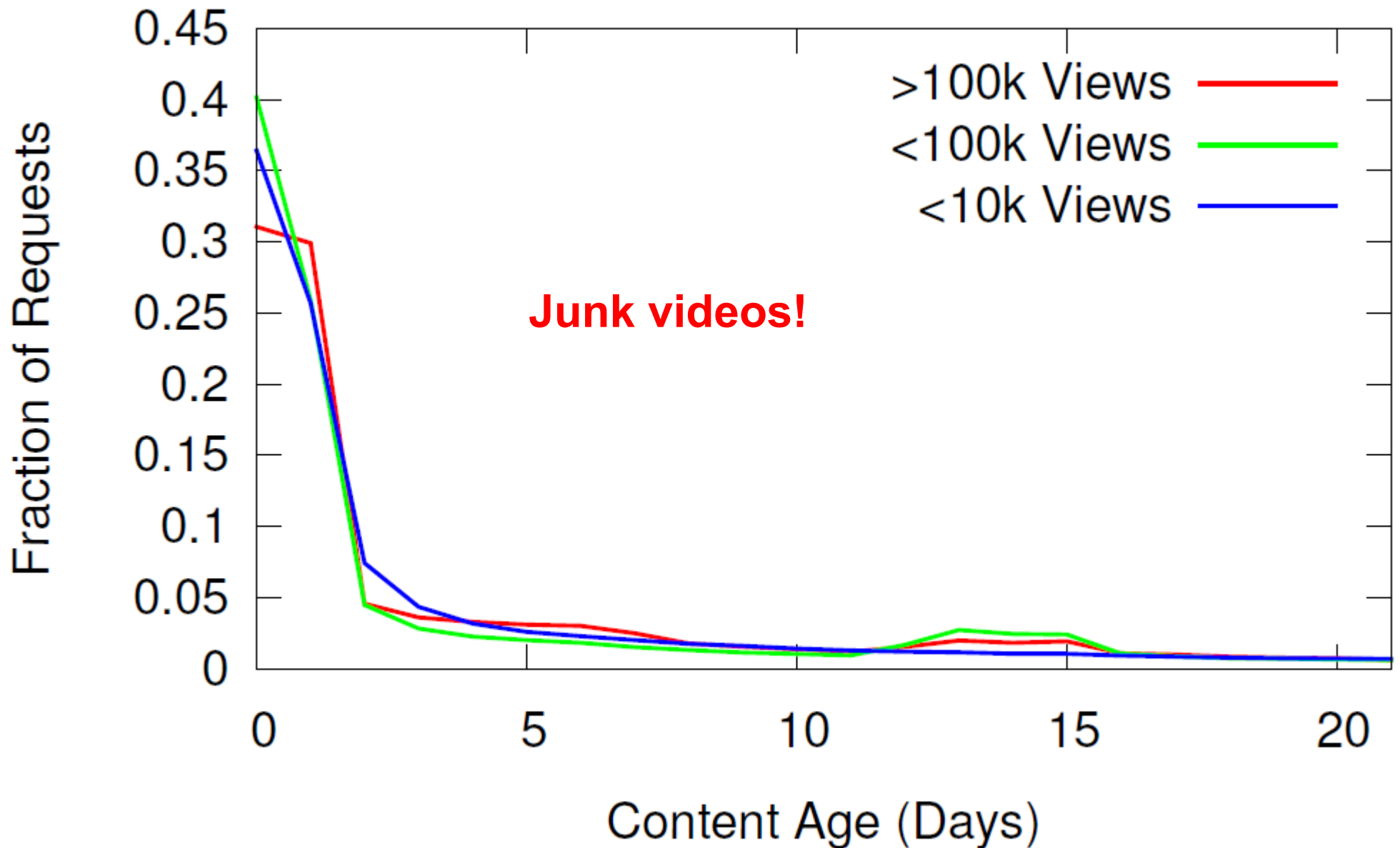
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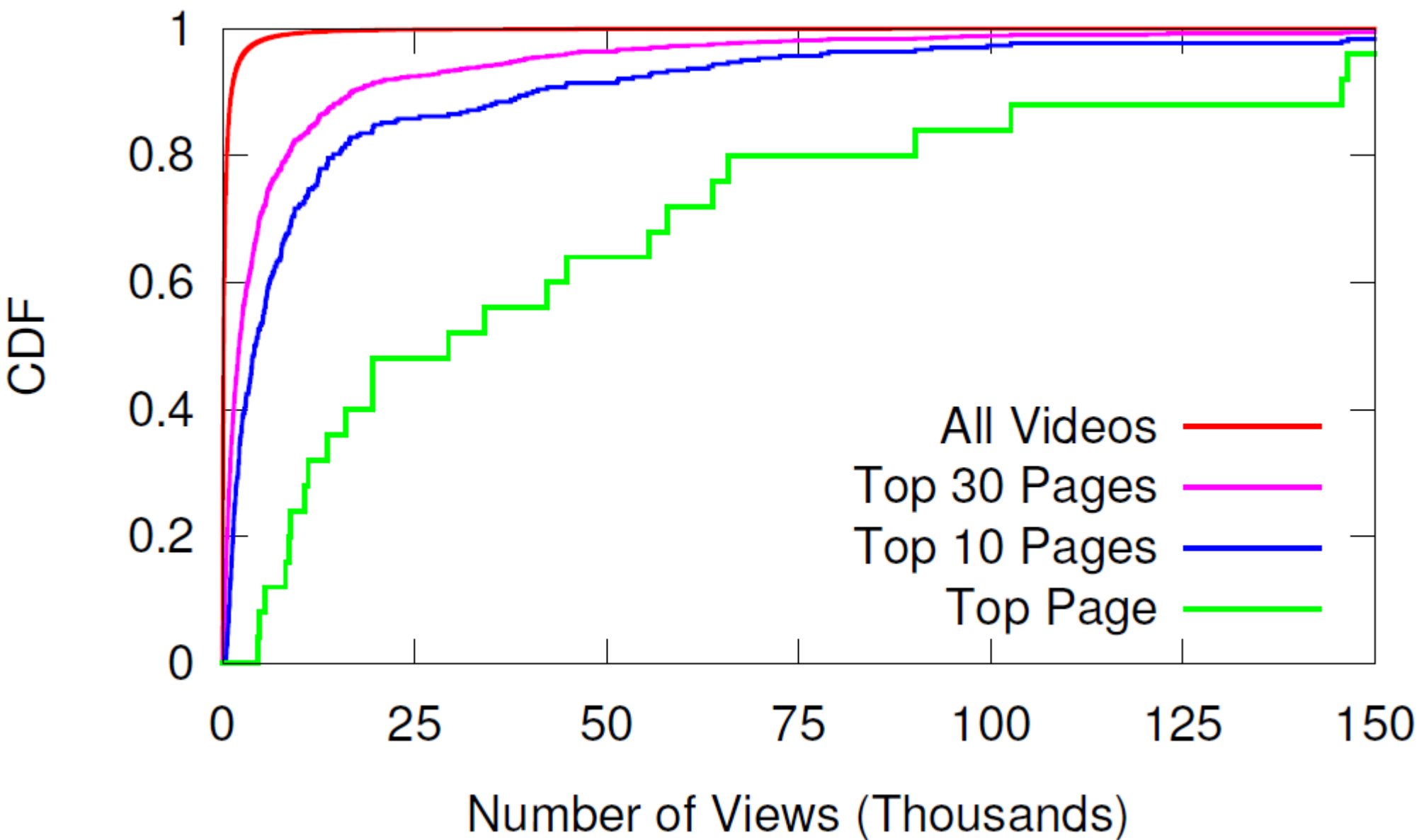
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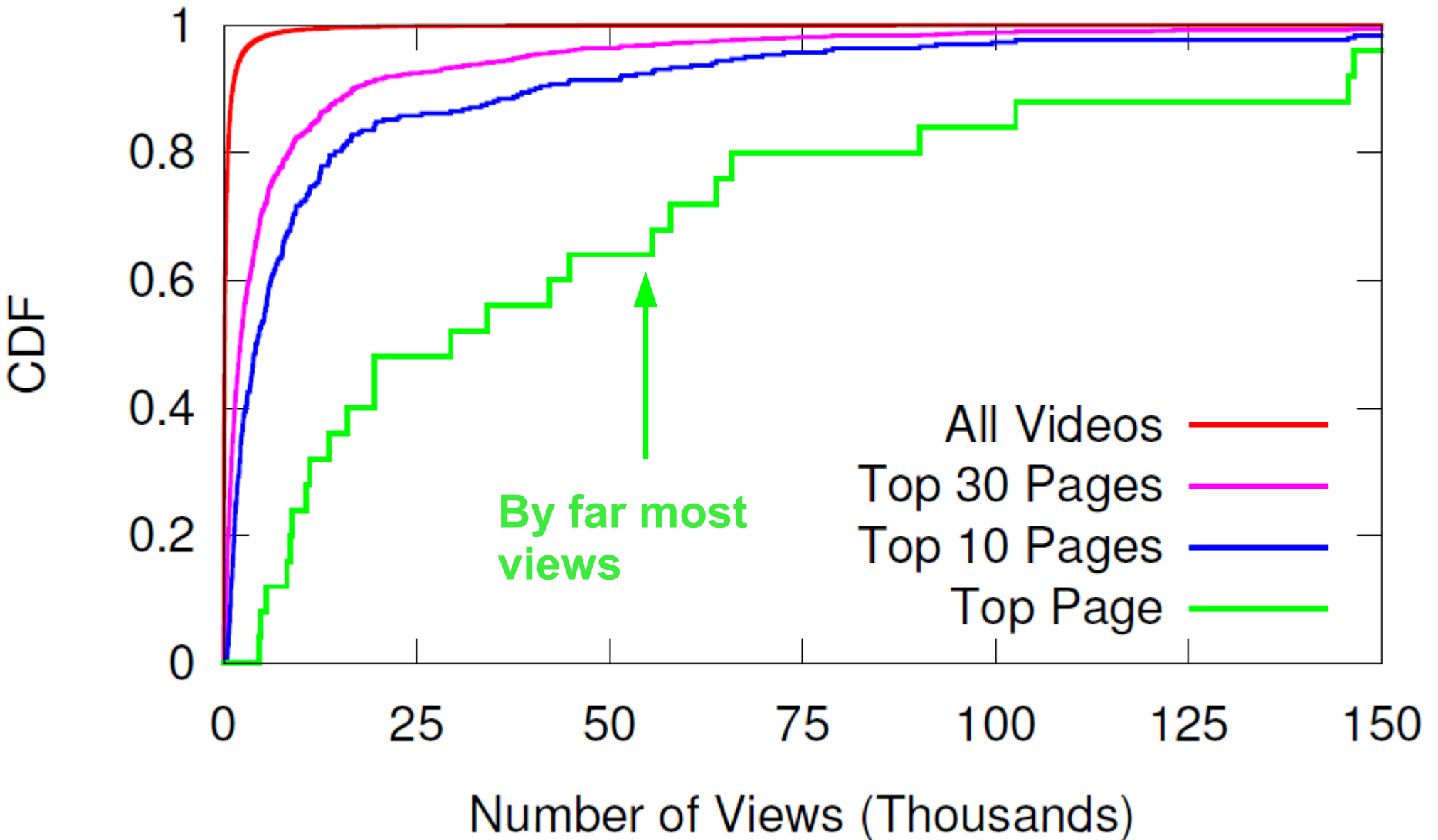
Why?

- Most users browse
 - 63% use front-page browsing
 - 59% use category-page browsing
 - Only 22% visit the site with a particular video in-mind
 - Only 9% use links from other sites
- Users are easily satisfied
 - Only 15% find it difficult to locate videos of interest
 - 43% of users are satisfied by over 3/5th of content

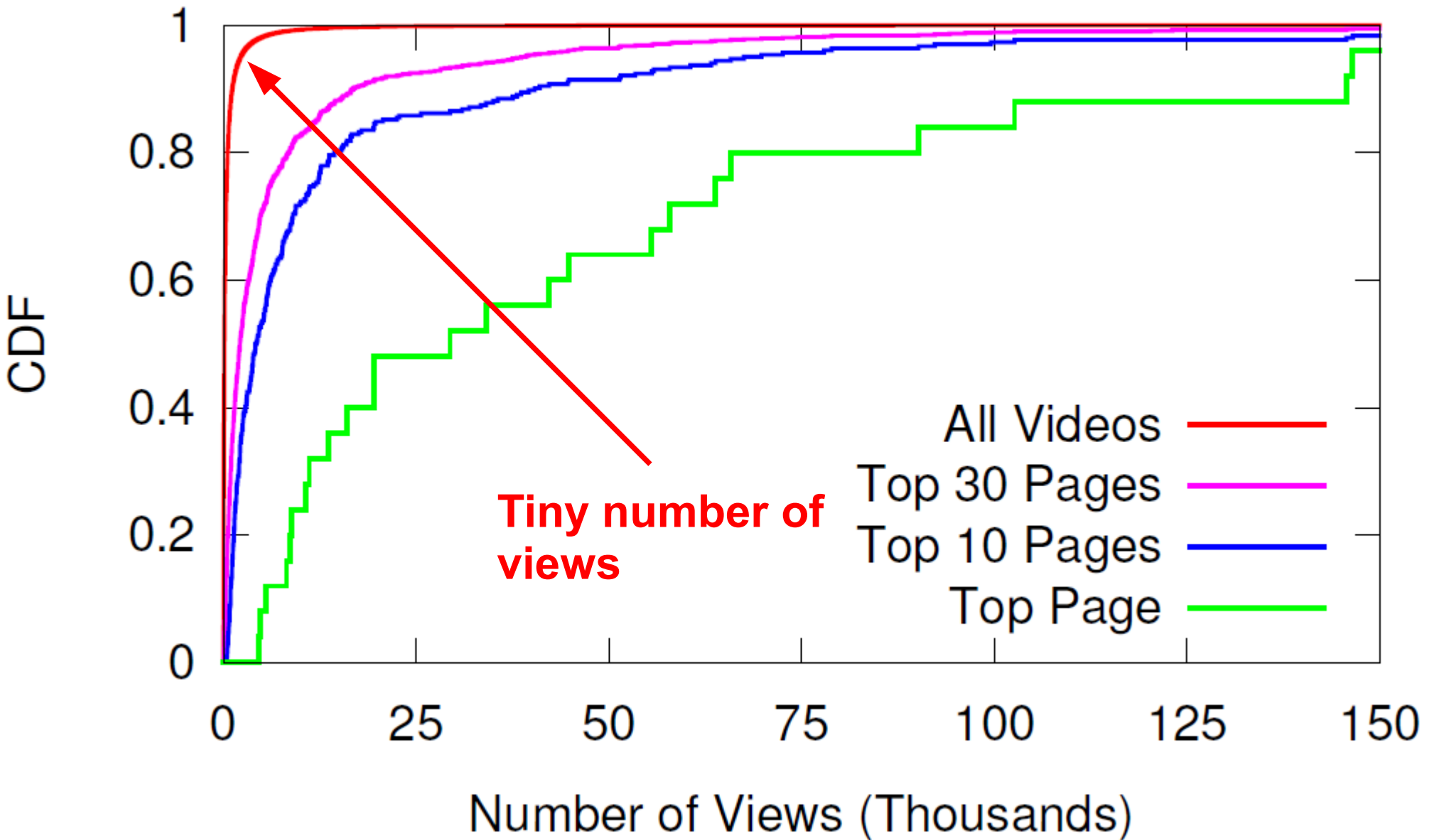
Views Per-Page



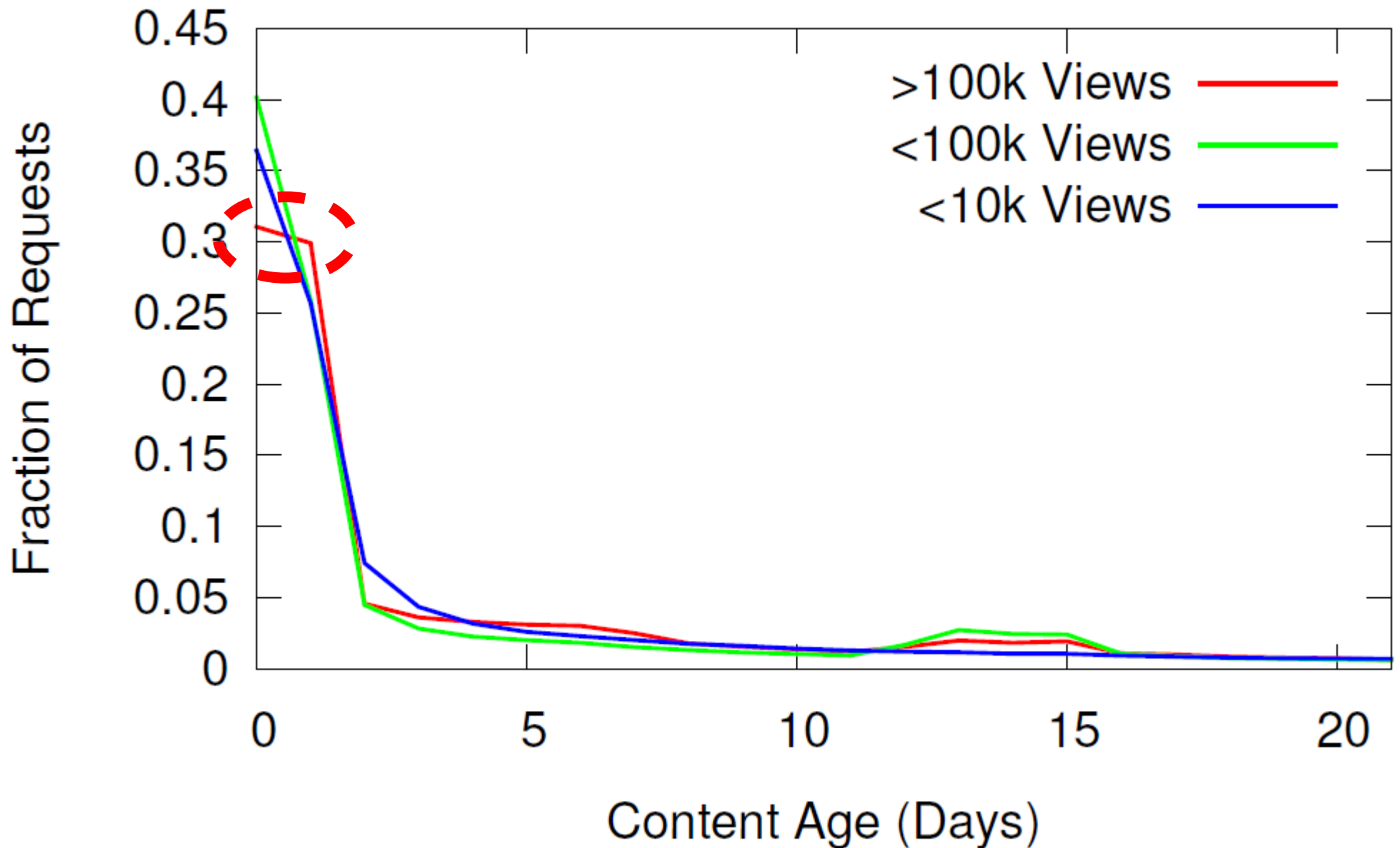
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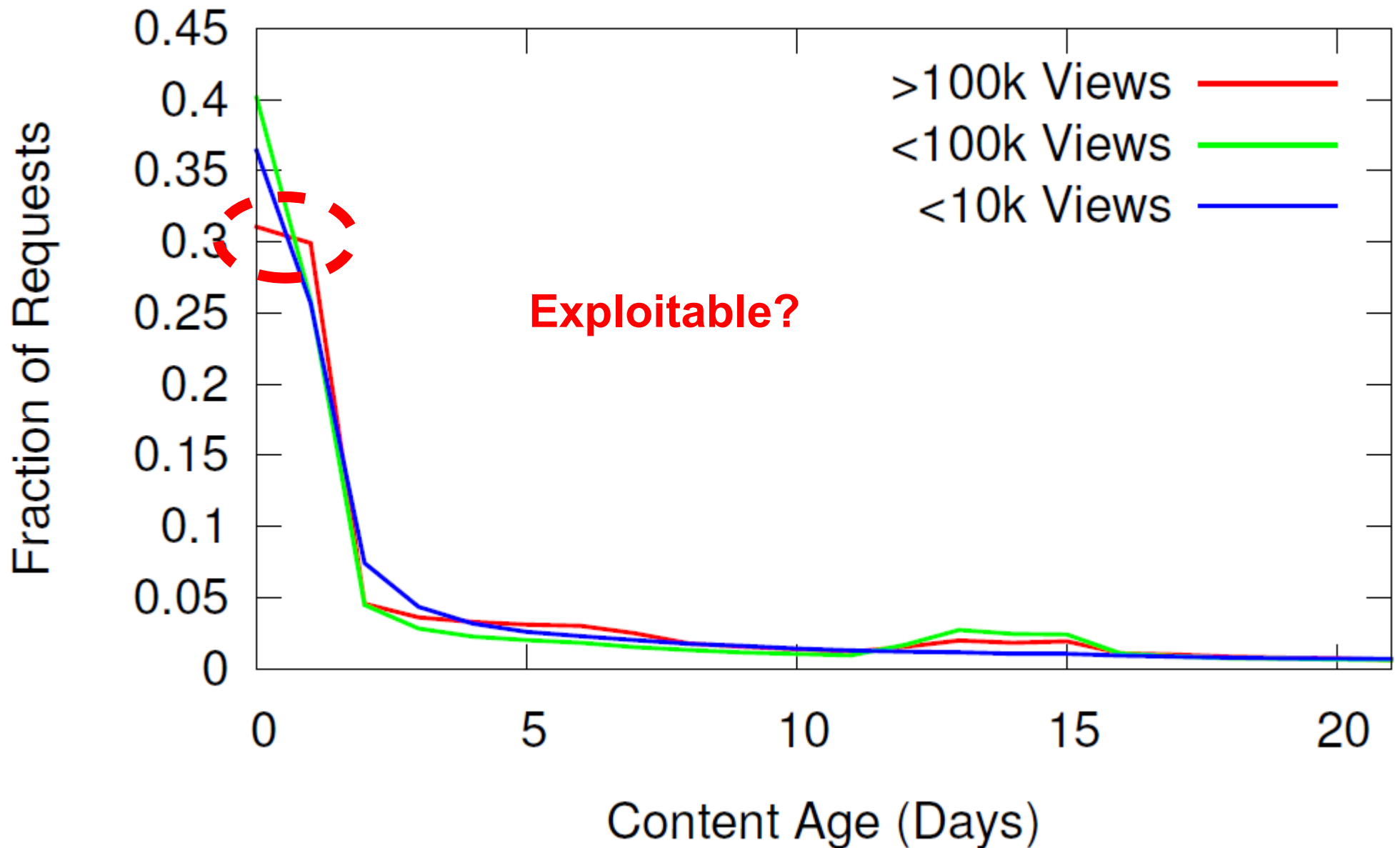
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Video Popularity over Time



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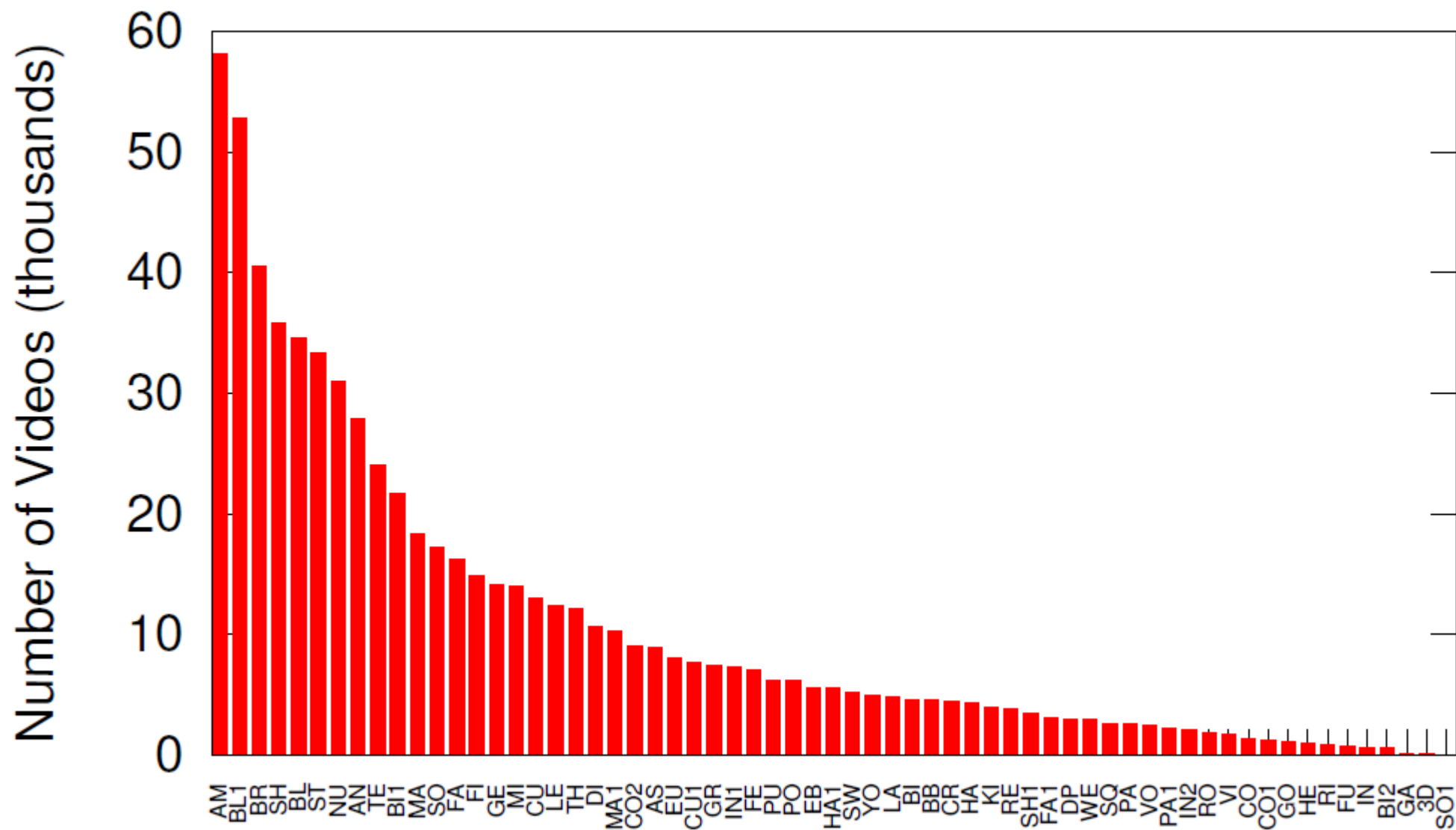


YouPorn's Category System

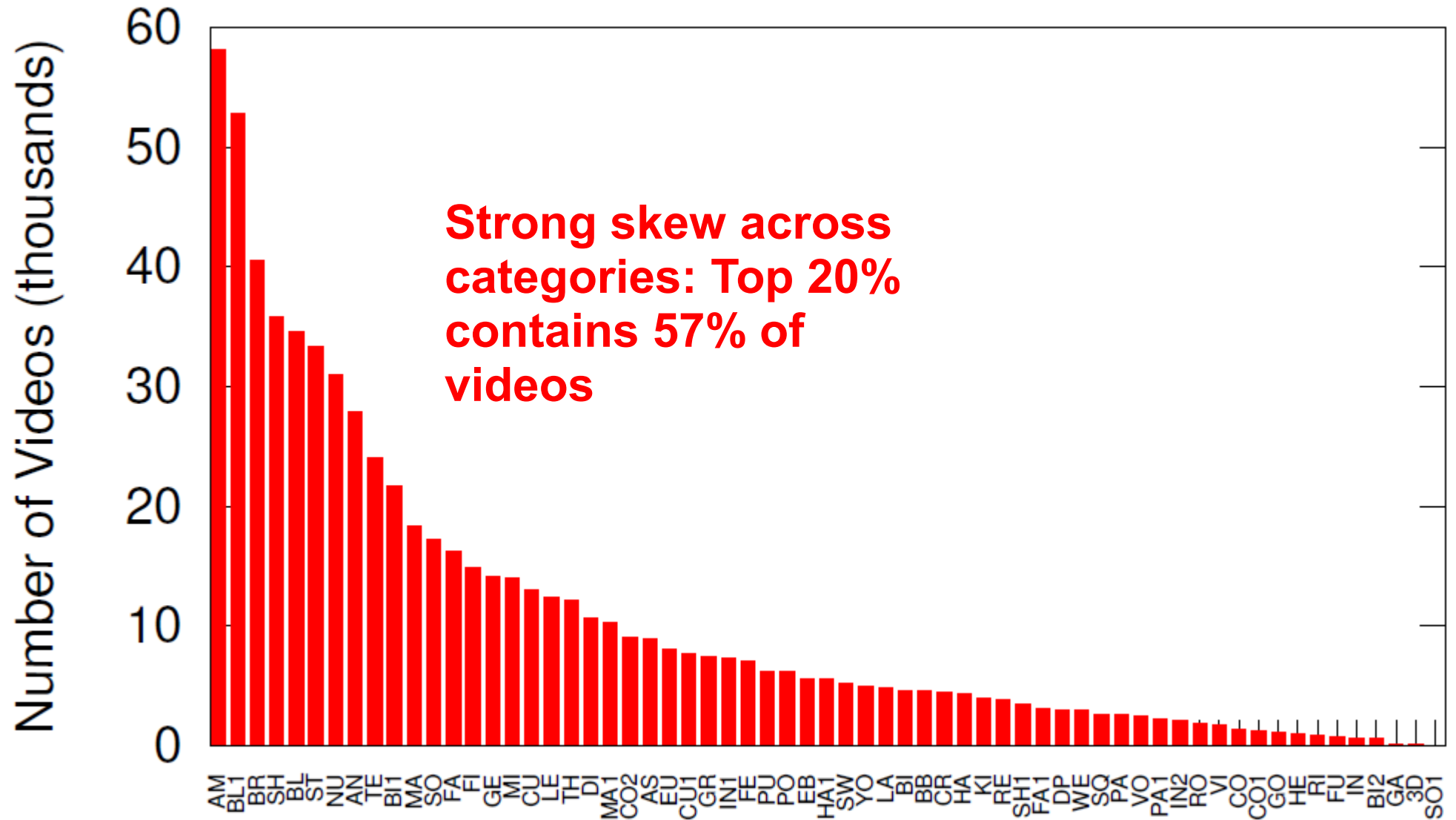
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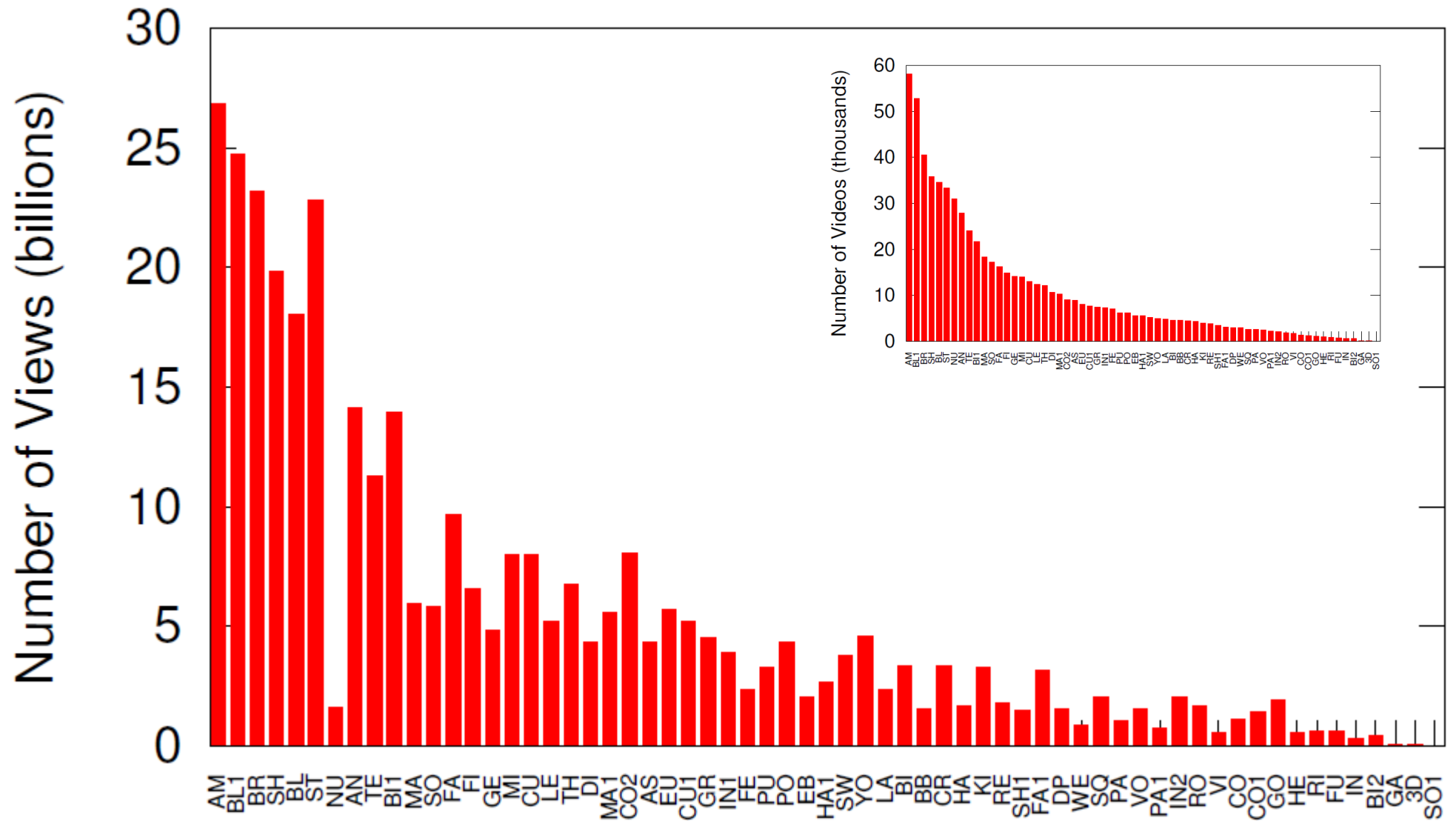
Category Density



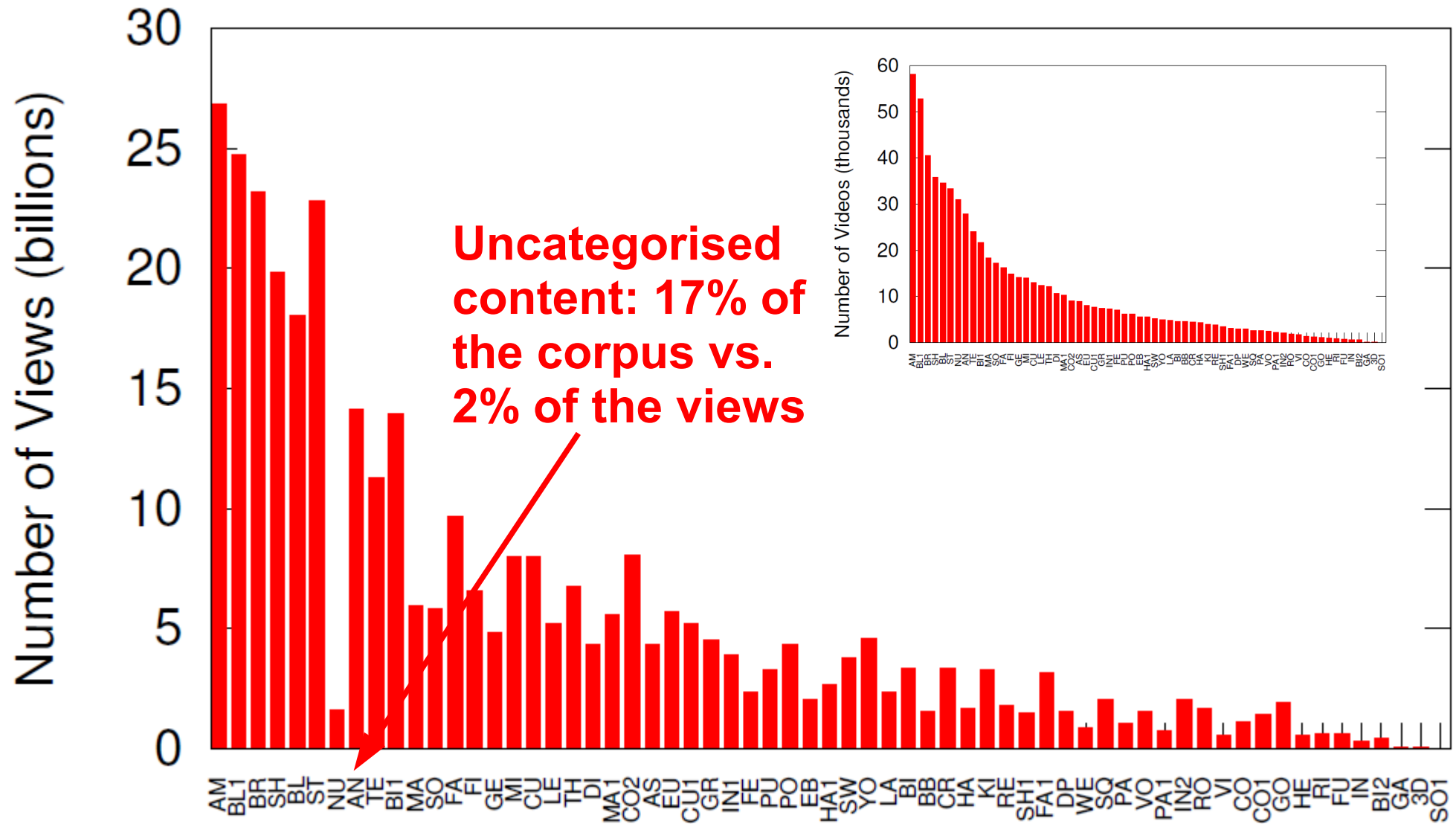
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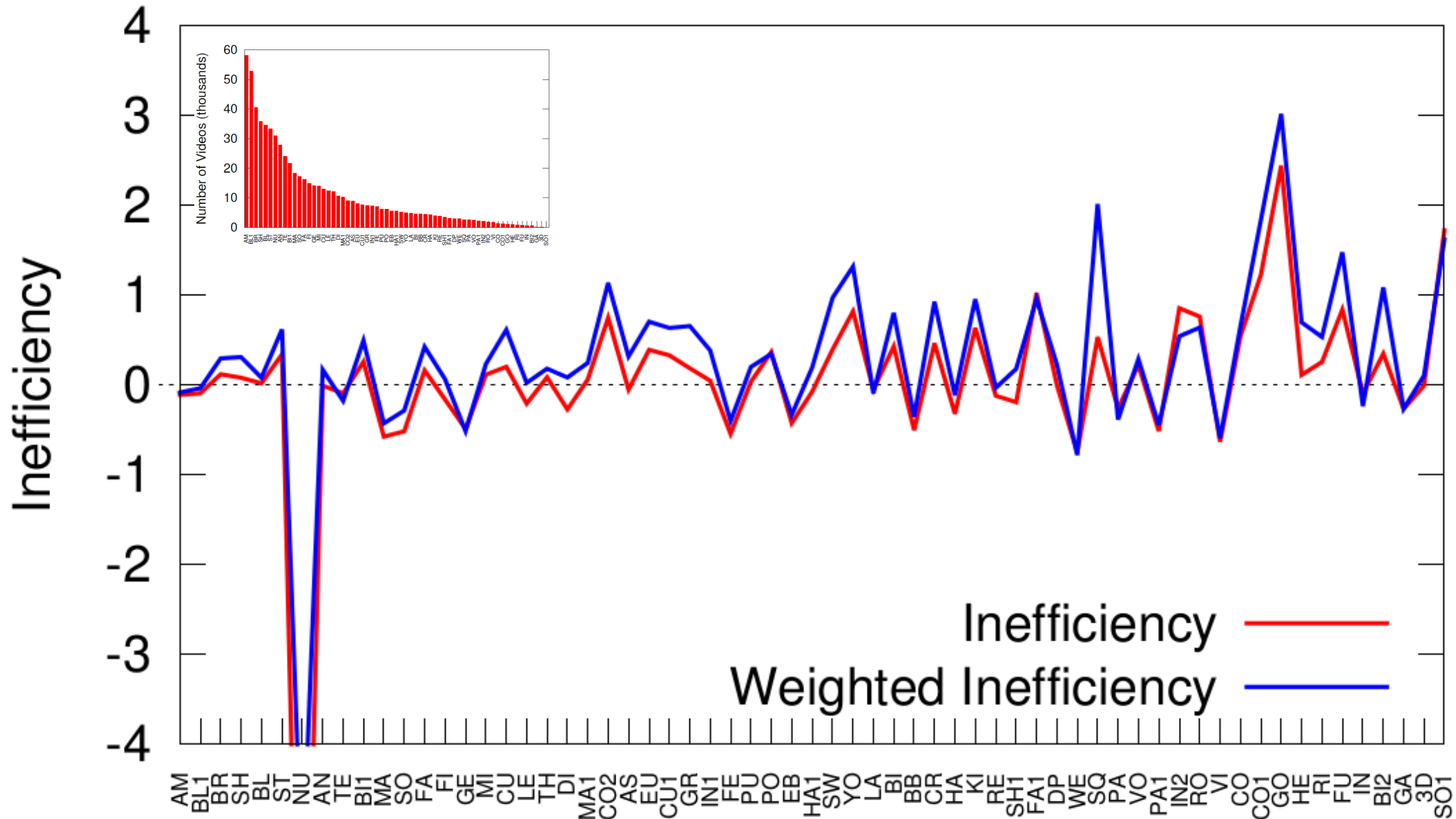
Category Popularity



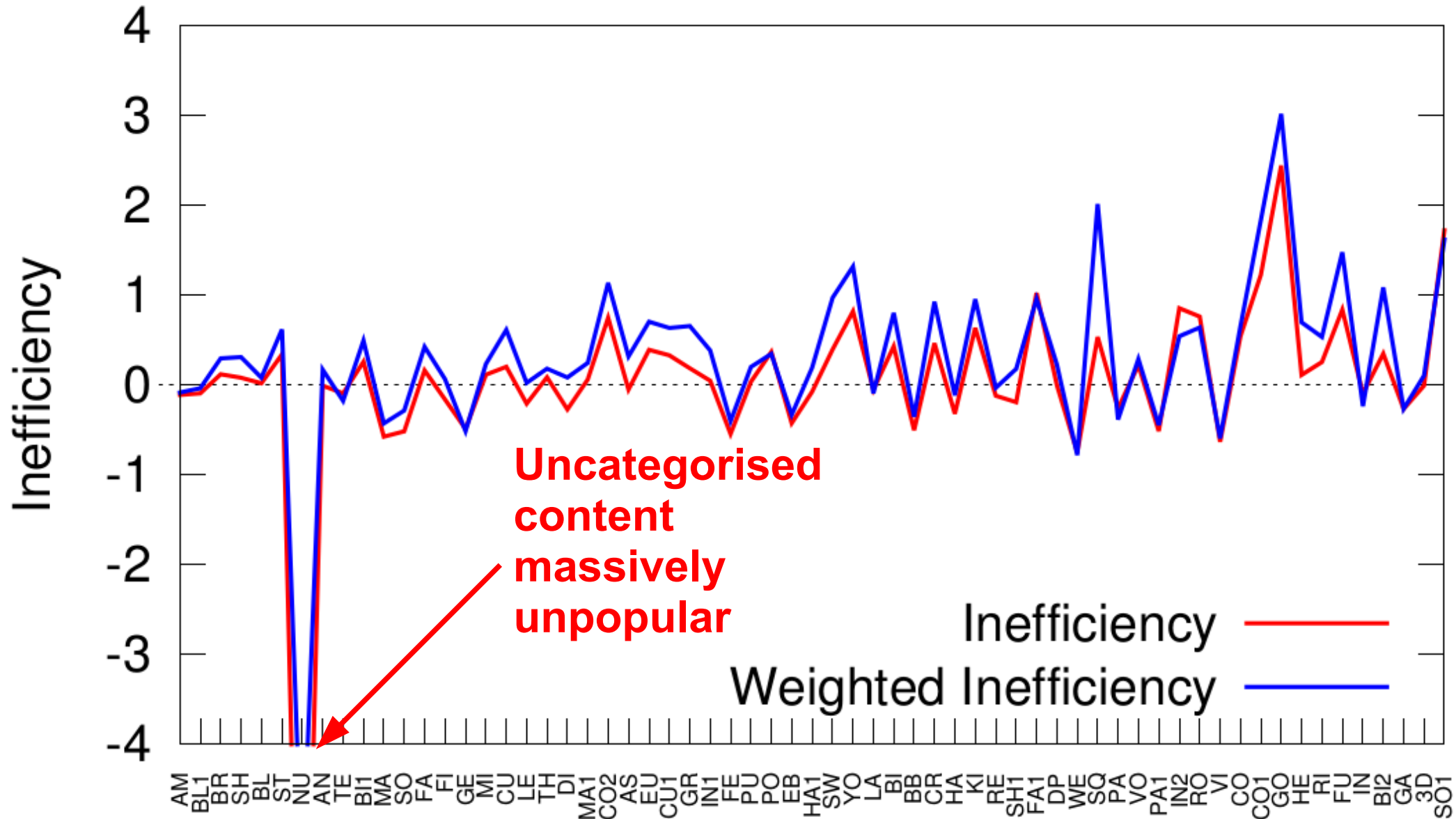
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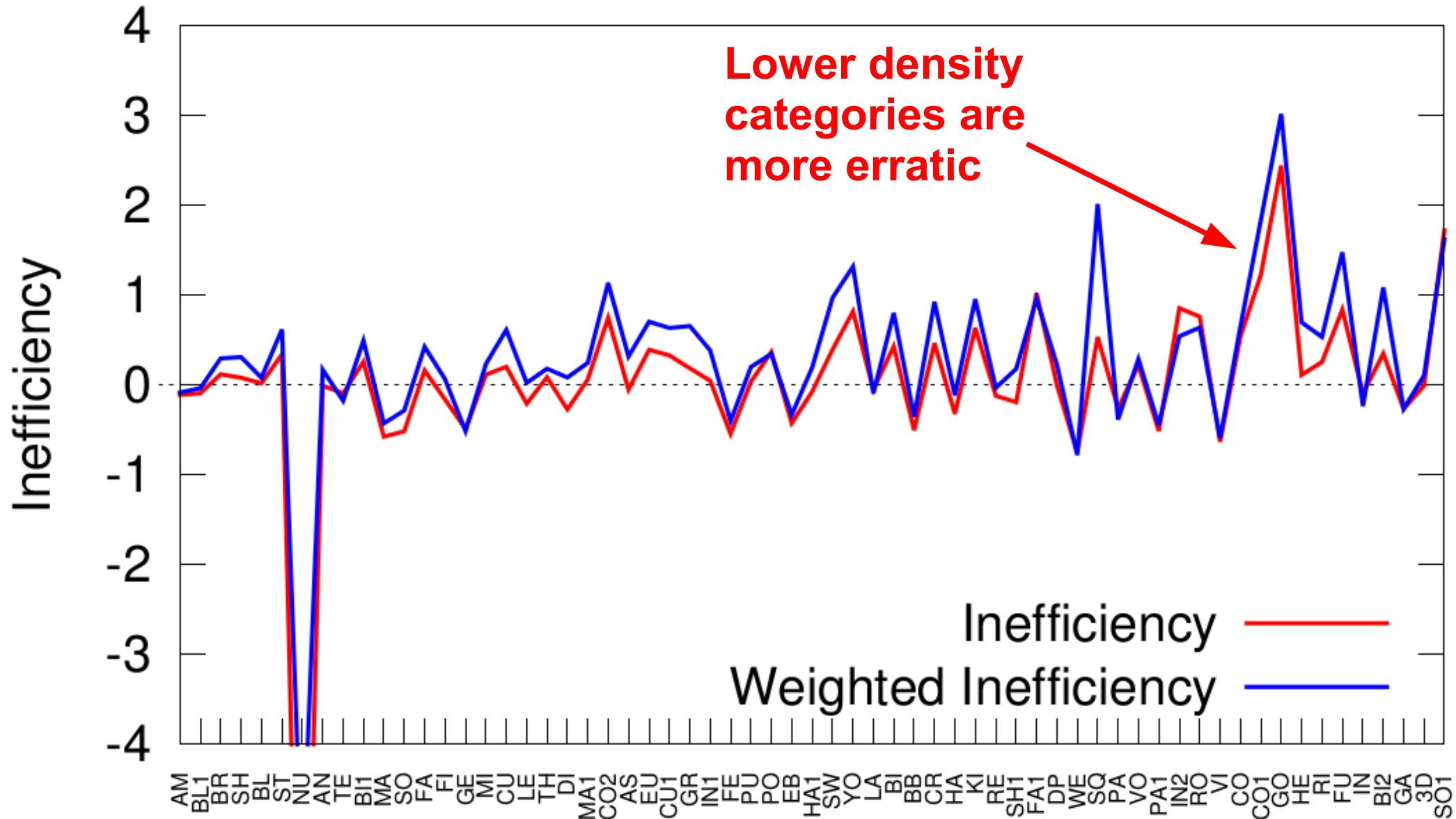
Category (In)efficiency $\mathcal{I} = \begin{cases} \frac{V}{C} - 1, & \text{if } V > C. \\ -(\frac{C}{V}) + 1, & \text{otherwise.} \end{cases}$



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